



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D2576-1

Job Sheet 197166



Part No: D2576-1

Job Qty: 100 pcs

Part Name: Step (Casting Detail)



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 7/2/19

Job Tracking No:

Due Date: 8/16/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG REV G IPP Rev: A New Issue 05-11-29 JLM IPP rev B rev F dwg 07.07.06 EC IPP Rev:C As per Rev G
07-09-05 JLM Verified By:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Hrs	Run Hrs	Workcenter/Supplier	Lead Time	Sign-off
100	Purchasing	100		8/16/19	0.00	0.00	Purchasing - 1		
	JUL 03 2019	13					Purchasing - 2		
	9-09	PO#13043898			x100		Purchasing - 3		DP JUL 31 2019
110	Packaging 2-1 - Receive - B4B	100		8/16/19	0.00	0.00	Packaging 2 - 1 - B4B		
							Packaging 2 - 2 - B4B		
							Packaging 2 - 3 - B4B		
							Packaging 2 - 5 - B4B		
							Packaging 2 - 4 - B4B		
							Packaging 2 - 6 - B4B		
							Packaging 2 - 7 - B4B		
							Packaging 2 - 8 - B4B		
							Packaging 2 - 9 - B4B		
							Packaging 2 - 10 - B4B		
							Packaging 2 - 11 - B4B		
							Packaging 2 - 12 - B4B		
							Packaging 2 - 13 - B4B		DP JUL 31 2019
							Packaging 2 - 14 - B4B		
							Packaging 2 - 15 - B4B		
							Packaging 2 - 16 - B4B		
							Packaging 2 - 17 - B4B		
							Packaging 2 - 18 - B4B		
							Packaging 2 - 19 - B4B		



Container No: S202013



Part: D2576-1

Job No: 197166

Serial No/Batch: S202013

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 07/31/19

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL : 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

P.T.O.

					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 27 - B4B	
					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
120	QC 5	100 pcs	8/16/19	0.00 0.00	QC 6 - 9	19-11-30
					QC 6 - 68	
					QC 6 - 61	
					QC 6 - 40	
130	Packaging 3-1 - Stock - B4B	100 pcs	8/16/19	0.00 0.00	Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 -	

				B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
				Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
				Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
140	QC 21 - SA	100 pcs	8/16/19	0.00 0.00	QC 21 - SA - 21
					QC 21 - SA - 70
					QC 21 - SA - 53

DAS
21

DEC 11 2019

Part Op 100 - (Purchasing) Issue P/O: _____ Cast per D2576-1 Pattern vendor: Alpine Non- Ferrous Material Release
 Descriptions: Note Required
 110 - (Receive & Inspect for Damage & Mat'l Certs) Ensure D2576 mould is returned with the ordered parts Ensure release note is attached
 120 - (QC6- All purchased or subcontracted products)
 130 - (Identify as per dwg & Stock Location: _____) MAT060
 140 - (QC21- Final Inspection - Work Order Release)

Job BOM

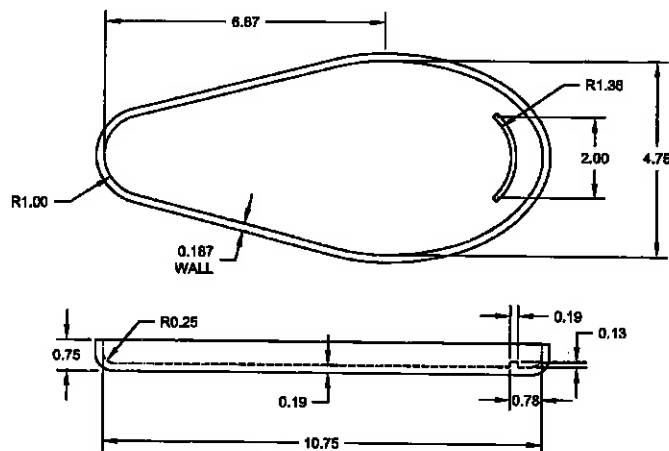
Part / Item	Component Name	Quantity	Operation	Container
D2576-1P	Step (Casting Detail)	100 pcs (1 ea)	100-Purchasing	S202012

Job Allocations

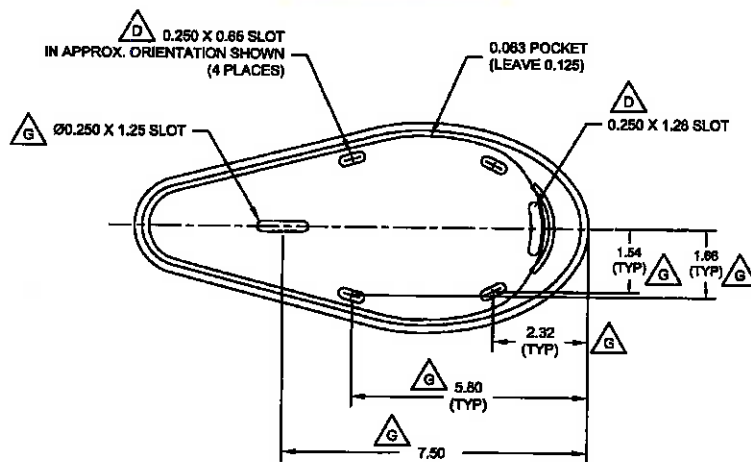
Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D2576-1P	100	0	0

Part Specifications

Specifications could not be found.



D2576-1 CASTING



D2576-3 MACHINING DETAIL
(MAKE FROM D2576-1)

- NOTES:**
- 1) MATERIAL: CAST ALUMINUM ALLOY A-535.2
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.025 TO 0.050 MAX
 - 6) IDENTIFICATION: NONE

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER

NO. 19716645
190702

RELEASED

07.08.21

G	- CHANGE SLOTS LOCATION AND SIZE ON D2576-3 - DUE TO SKID BENDING PROGRAM CHANGES - UPDATE CNC PROGRAM	MB	07.08.15
F	7.05 WAS 6.61	PH	07.04.17
E	CHANGE 0.50 HOLE LOCATION AND ADD NOTE	RF	99.09.07
D	CHANGE SLOT SIZE AND LOCATION (TSR A1069)	CP	99.08.18
C	ADD POCKETS AND SLOTS FOR WELDING	DS	98.08.18
B	REMOVE POCKETS, ADD HOLE	DS	96.11.28
A	NEW ISSUE	DS	96.09.18
REV.	DESCRIPTION	BY	DATE
DESIGN	4	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	1		
CHECKED	PH		
MFG. APPR.	2		
APPROVED	1		
DE APPR.	1	REV. G	
DATE	07.08.15	SHEET 1 OF 1	
		SCALE	
		1:	
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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB043898



Supplier: ALN001-VC
Alpine Non-Ferrous Foundry
8657 - 132nd Street
Surrey
BC
V3W 4P1 Canada
Phone: 604 596 8080
Fax: 604 596 8045

PO No: POHB043898

PO Date: 7/3/19

Due Date: 7/30/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
Phone: 613-623-5200 Ext: 242
Fax: 613-632-1053
clavoie@dartaero.com

E-MAILED
JUL 04 2019

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	190784	D2576-1P		Step (Casting Detail) As Per dwg D2576 Rev. G	Firmed	-	7/30/19	100 pcs	0 pcs	100 pcs	\$21.00/pcs	\$2,100.00
											Grand Total:	\$2,100.00

Order Notes

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Procurement Quality Clauses

A005 RIGHT OF ENTRY

A007 FIRST ARTICLE INSPECTION (FAI) BY SELLER, (DOCUMENTATION MAINTAINED BY SUPPLIER)

A012 CHEMICAL AND PHYSICAL TEST REPORTS

A016 PERSONNEL QUALIFICATION

A017 RAW MATERIAL IDENTIFICATION (AS APPLICABLE)

A026 CERTIFICATION OF MATERIAL CONFORMANCE

A041 QUALITY MANAGEMENT SYSTEM

A042 DART NOTIFICATION BY SUPPLIER

A043 RETENTION OF QUALITY DOCUMENT

A048 COUNTERFEIT PARTS AVOIDANCE, DETECTION, MITIGATION AND DISPOSITION PROGRAM

A049 SUPPLIER AWARENESS

NONE PROVIDE

CL

Plex 7/3/19 7:38 AM dart.lavoie.chantal

ALPINE NON-FERROUS FOUNDRY

8657-132ND STREET
SURREY, B.C. V3W 4P1
CANADA

WORK ORDER

Order No.: POHB043898
Date: 04 Jul, 2019
Page: 1
Ship Date: 29 Jul, 2019

Sold To:

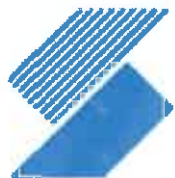
DART AEROSPACE
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

Ship To:

DART AEROSPACE

Order Date	Purchase Order#	Due Date	Ship Via	Page
04 Jul, 2019	POHB043898	29 Jul, 2019	FEDEX	1
Item No.	Description	Ordered	Backorder quantity	Shipped quantity
DART D2576	D2576 STEP CSTG GS - GST @ 5% GST PST Exempt: #6122-5207 RECEIVED JUL 31 2019 DART AEROSPACE LTD.	100	100	160
ALPINE NON-FERROUS FOUNDRY GST: #87550 0001				

Comment: Castings&Patterns are property of Alpine until paid in full



SYMTAX INDUSTRIES ENTERPRISES CORP.

Certificate of Analysis



Lot no.: 107091302

Name: 535.2 Ingot

Date: 2018/09/19

	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn
	%	%	%	%	%	%	%	%
1	0.033	0.079	0.0006	0.230	7.14	0.0033	0.0049	<0.00060
2	0.027	0.079	0.0005	0.200	6.63	0.0028	0.0046	<0.00060
3	0.025	0.080	0.0006	0.204	6.90	0.0033	0.0046	<0.00060
4	0.028	0.078	0.0005	0.219	6.90	0.0027	0.0041	<0.00060
5	0.025	0.080	0.0003	0.186	6.83	0.0034	0.0049	<0.00060

	Ti	Ca	Na	Pb	Sb	Sn	Sr	Al
	%	%	%	%	%	%	%	%
1	0.136	<0.00010	0.0024	0.0025	<0.00040	<0.00050	<0.00010	92.4
2	0.121	<0.00010	0.0019	0.0020	<0.00040	<0.00050	<0.00010	92.9
3	0.143	<0.00010	0.0018	0.0024	<0.00040	<0.00050	<0.00010	92.6
4	0.139	<0.00010	0.0029	0.0022	<0.00040	<0.00050	<0.00010	92.6
5	0.136	<0.00010	0.0017	0.0021	<0.00040	<0.00050	<0.00010	92.7

ALPINE NON-FERROUS FOUNDRY

8657-132ND STREET
SURREY, B.C. V3W 4P1
CANADA
Tel: (604) 596-8080
Fax: (604) 596-8045

Packing Slip

Packing Slip No.: 7064
Date: 30 Jul, 2019
Page: 1

Sold to:	Ship to:
DART AEROSPACE 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7 CANADA	DART AEROSPACE
Order No.: POHB043898	Sold By:
Shipped By: FEDEX	Ship Date: 29 Jul, 2019
Tracking No.:	

Item No.	Unit	Description	Quantity
DART D2576	Each	D2576 STEP CSTG All castings made using material 535.2 from SYMTAX IND. Heat #107091302 LOT. 1 L. 2 Svetl Gutsu Office Manager	100
Comment:			



SYMTAX INDUSTRIES ENTERPRISES CORP.

Certificate of Analysis



Lot no.: 107091302

Name: 535.2 Ingot

Date: 2018/09/19

	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn
	%	%	%	%	%	%	%	%
1	0.033	0.079	0.0006	0.230	7.14	0.0033	0.0049	<0.00060
2	0.027	0.079	0.0005	0.200	6.63	0.0028	0.0046	<0.00060
3	0.025	0.080	0.0006	0.204	6.90	0.0033	0.0046	<0.00060
4	0.028	0.078	0.0005	0.219	6.90	0.0027	0.0041	<0.00060
5	0.025	0.080	0.0003	0.186	6.83	0.0034	0.0049	<0.00060

	Ti	Ca	Na	Pb	Sb	Sn	Sr	Al
	%	%	%	%	%	%	%	%
1	0.136	<0.00010	0.0024	0.0025	<0.00040	<0.00050	<0.00010	92.4
2	0.121	<0.00010	0.0019	0.0020	<0.00040	<0.00050	<0.00010	92.9
3	0.143	<0.00010	0.0018	0.0024	<0.00040	<0.00050	<0.00010	92.6
4	0.139	<0.00010	0.0029	0.0022	<0.00040	<0.00050	<0.00010	92.6
5	0.136	<0.00010	0.0017	0.0021	<0.00040	<0.00050	<0.00010	92.7

TEST CERTIFICATE

DART AEROSPACE LTD.
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
Canada

Requested by: Steven Hemmerich

PO / SO: POHB045021
Material: Aluminum

Specification(s): ASTM B179 Rev. 18 (535.2)

Element Lab #: 93059
COA #: 17346, Issue # 1
Issued date: 2019-11-27

Description: Spectroscopy analysis per ASTM
D1976 on sample of 535.2 cast aluminum

Item: D2571 Casting

CHEMICAL ANALYSIS

Test ID	Element	Description	Result	Min	Max	Unit	Method	Comments
230932	B	Boron	< 0.002		0.002	wt%	ICP	Notes: Analysis was subcontracted to Element-Daleville in Indiana, USA.
	Be	<u>Beryllium</u>	<u>0.002</u>	0.003	0.007	wt%	ICP	
	Cu	<u>Copper</u>	< 0.01		0.05	wt%	ICP	
	Fe	Iron	0.08		0.10	wt%	ICP	
	Mg	Magnesium	6.8	6.6	7.5	wt%	ICP	
	Mn	Manganese	0.23	0.10	0.25	wt%	ICP	
	OE	Other Elements	< 0.05		0.05	wt%	ICP	
	OET	Other Elements Total	< 0.15		0.15	wt%	ICP	
	Si	Silicon	< 0.01		0.10	wt%	ICP	
	Ti	Titanium	0.14		0.25	wt%	ICP	

Disposition

Does NOT conform to requirements. Underlined results above do not conform to requirements.

ISO 17025 SCC accredited laboratory: Certificate # 288.

Nadcap accredited Materials Testing Laboratory.

Bombardier aerospace approved supplier Code 107448, PWC approved supplier Code 21029, Boeing approved processor Code BE10361822.

The laboratory has tested the material/items supplied by the client as sampled in accordance with the client's own requirements.

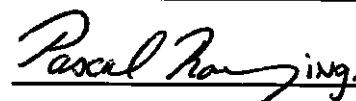
Element submits this certification as the confidential property of its client. It shall not be reproduced except in full, without the written approval of the laboratory.

The recording of false, fictitious or fraudulent statements or entries on this document may be punished as a felony under federal law.

Unless otherwise agreed Aerospace/military samples will be retained for one year. Other samples will be retained for 3 months.

Page 1 of 1

Signed for and on behalf of Element



Pascal Roussy, ing., M. Ing. OIQ # 125772
Directeur des opérations/Operations Manager

